

## REMARKS

Claims 1-19 continue to be the pending claims in the application.

Reconsideration of the application in light of the remarks which follow is respectfully requested.

The Office Action rejected Claims 1-19 under 35 U.S.C. § 103(a) as being unpatentable over Ahluwalia (US 5,965,257) in view of Langer (US 4,600,634) and GB 2167060 (GB '060) or Dugan (US 4,994,317) or Dombeck (US 6,228,497).

**I. Claim 1 - The Office Action's Proposed Combination Does Not Teach or Reasonably Suggest "Said Coating Does Not Bleed Through Said Substrate"**

The Office Action states that Applicants' response of July 28, 2008 is "not persuasive because Applicant cannot show non-obviousness by attacking references individually where, as here, the rejections are based on a combination of references." *See* Office Action, page 4. While Applicants agree that the proposed combination must be considered as a whole, Applicants also respectfully submit that a piecemeal analysis of each recitation in the claim without considering the breath of the claim as a whole is improper. *See* MPEP § 2106 II C ("Finally, when evaluating the scope of a claim, every limitation in the claim must be considered. USPTO personnel may not dissect a claimed invention into discrete elements and then evaluate the elements in isolation.").

Claim 1 recites more than a mere combination of known elements. Even if it were obvious, which it is not as discussed below, to one of ordinary skill in the art to modify Ahluwalia '257 to: 1) adhere a metallic component to the coated substrate of Ahluwalia '257 and 2) include clay in the filler material of Ahluwalia '257, the Office Action has still failed to establish a *prima facie* case of obviousness against Claim 1 for at least the following reasons.

Claim 1 recites, in part, “a coating which coats the substrate having essentially the same ionic charge . . . wherein said coating does not bleed through said substrate” (emphasis added).

Apparently the Office Action relies on Ahluwalia ‘257 as teaching the feature of “said coating does not bleed through said substrate.” *See* Office Action, page 2. That teaching in Ahluwalia ‘257 however, only applies to the specific structure and composition of the composite materials disclosed in Ahluwalia ‘257. Indeed, Ahluwalia ‘257 identified that composite materials with a different structure and composition are known to bleed through the substrate. *See* Ahluwalia ‘257 Col.1, lines 12-63. Further, Ahluwalia ‘257 specifies that the filler component of the inventive zero bleed through coating is selected from the group consisting of fly ash, charged calcium carbonate, ceramic microspheres and mixtures thereof. Clay is not included in that group. The Office Action provides no rationale whatsoever as to how the composite materials disclosed in Ahluwalia ‘257 would need to be modified in order to achieve a new composite material which includes the admittedly lacking elements of Claim 1 and a coating that does not bleed through the substrate. Nor does the Office Action provide any rationale as to how the composite materials disclosed in Ahluwalia ‘257 could be modified to include the admittedly lacking elements of Claim 1 while maintaining a coating with essentially the same ionic charge as the substrate it coats and that does not bleed through the substrate. In addition, the Office Action fails to account for the leap of logic as to how characteristics of the Ahluwalia ‘257 composite materials will also exist in the Office Action’s proposed composite material, especially when the Office Action fails to provide any level of specificity as to the specific structure and composition of the proposed composite material.

A review of the other art cited (Langer, GB ‘060, Dugan and Dombeck) has failed to reveal anything that, in Applicants’ opinion, would remedy these deficiencies in the Office Action’s obviousness rationale against Claim 1. As discussed in the response of July 28, 2008,

those references are silent with regard to a coating that has essentially the same ionic charge as the substrate it coats and that does not bleed through the substrate.

Accordingly, the rejection under 35 U.S.C § 103(a) is deemed obviated, and its withdrawal is respectfully requested.

Should the Office maintain this rejection despite the foregoing, Applicants respectfully request the Office to explain in detail specifically how the composite materials of Ahluwalia '257 could be reconstructed while maintaining a coating with essentially the same ionic charge as the substrate it coats and that does not bleed through the substrate, as proposed in the Office Action.

**II. The Combinations recited in Claims 1 and 16 Are Not Obvious - Their Results Were Unexpected**

The Office Action contends that it “would have been obvious to one having ordinary skill in the art to have added Langer’s aluminum sheet to one or both sides of the coated substrate of Ahluwalia, motivated by the desire to create a structural article with increased strength and durability.” Applicants respectfully submit that even if the Office Action established a *prima facie* case of obvious (which it did not), then that *prima facie* case of obvious is properly rebutted since the results of the claimed combination were unexpected. *See* MPEP § 2141 V.

As previously discussed, the present invention is based, at least in part, on the unexpected discovery that the inclusion of a metallic component on the fire resistant fabric materials of Ahluwalia '550 (which is derived from the Ahluwalia '257 composite material with a clay filler added) surprisingly results in a composite material with superior heat insulating properties and fire resistant properties that is still flexible. *See* paragraph 14 of the present

specification. Applicants respectfully submit that the series of Bunsen Burner-cotton ball tests conducted by Applicants clearly demonstrates the surprising superior heat insulating properties and fire resistant properties of the present invention.

As indicated in paragraphs 49 and 50, Applicants performed a cotton ball test to determine whether, when exposed to the flame of a Bunsen Burner, a cotton ball placed on top of the composite materials of the invention and on the other side of the flame, would be protected from the flame.

The three samples included in the test were:

- 1) the Ahluwalia '257 composite material (which does not include a clay filler) modified to have aluminum foil adhered thereto,
- 2) the Ahluwalia '550 composite material unmodified (which is derived from the Ahluwalia '257 composite material with a clay filler added), and
- 3) the presently claimed invention (Ahluwalia '550 composite material modified to have aluminum foil adhered thereto).

Using the above numbering for the samples, the time to burn for the cotton balls placed on top of sample #1 was 1 to 5 minutes, while the time to burn for the cotton balls placed on top of sample #2 was 14 minutes. In stark contrast however, the cotton balls placed on top of the sample #3 did not burn even after 8.5 hours. These data points clearly indicate that the mere addition of aluminum foil or a clay filler, each on there own, failed to suggest the significant improvements demonstrated when both are included in the manner set forth in the presently claimed invention.

In accordance with MPEP § 2141, the Office must consider unexpected results when determining whether a claimed combination is obvious. In view of the above unexpected

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results, Applicants respectfully submit that the claimed combination of elements is not obvious even if the Office could provides a proper *prima facie* case of obviousness against Claims 1 and 16.

Therefore, Applicants respectfully request that the rejection of claim 1-19 under 35 U.S.C. § 103(a) as being unpatentable over Ahluwalia in view of Langer and GB '060 or Dugan or Dombeck be withdrawn.

### **Conclusion**

Based on the foregoing, allowance of the claims is earnestly solicited. Please send any further correspondence relating to this application to the undersigned attorney at the address below.

Applicants believe no fee is due in connection with this communication. However, should any fee be due in connection with this communication, the Commissioner is authorized to charge any such fee to Deposit Account No. 50-3939.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address given below.

Respectfully submitted,

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